

### Exponential Assignment – Level 4 Possible

- To obtain level 4, you must show and explain each step in detail. This means showing me algebraically as well as explaining what you are doing in plain (non-mathy) language. Pretend I am your Spanish teacher who knows nothing about math! You have to explain it to me.

1. Solve the following equations using trial and error or graphing

a)  $6^x = 1003$

b)  $(-5)^{y-1} = -2459$

c)  $7^g = 5^{2g-3}$

2. Write the question based on the following equations

a)  $W = -40(0.8)^t$

b)  $Y = 80000(2.08)^x + 70$

3. Solve

a) 
$$\frac{(2pm^{-1}q^0)^{-4} \cdot 2m^{-1}p^3}{2pq^2}$$

b) 
$$\frac{(2hj^2k^{-2} \cdot h^4j^{-1}k^4)^0}{2h^{-3}j^{-4}k^{-2}}$$

c) 
$$\frac{z^{x+1}}{z^x} =$$

d) 
$$\frac{z^{x+x}}{z^{y+3}} =$$

4. EVALUATE EACH MONOMIAL FOR  $X = 5$ ,  $Y = -1$ , AND  $Z = 4$

a)  $y^4 =$

b)  $3x^3 =$

c)  $(yz)^2 =$

d)  $y^x =$

5. What is the area of a square with the length of a side equaling  $3a^5$ ?

6. What is the area of the rectangle with the width of  $6x^2$  and the length of  $12x^3$ ?